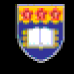
University of Wollongong 

Health Care of Older Australian Standing Committee
Delirium Care Pathways

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Final Report and
"Delirium Care Pathways" Final Version
May 2009

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Abbreviations

EADTSC	Eastern Australia Dementia Training & Study Centre
HCOASC	Health Care of Older Australians Standing Committee
RACFs	Residential Aged Care Facilities
SNMIH	School of Nursing, Midwifery & Indigenous Health
UoW	University of Wollongong

HCOASC "Delirium Care Pathways" Project
Final Report Draft Version1 and
"Delirium Care Pathways" Final Version4 Submission
March 2009

Introduction

This report provides an overview of the "Delirium Care Pathways" project which was commissioned to be delivered by NSW Health on behalf of the Health Care of Older Australians Standing Committee (HCOASC). The School of Nursing, Midwifery & Indigenous Health (SNMIH), University of Wollongong (UoW), was sub-contracted to deliver this project to NSW Health. This final report has been informed by ongoing progress reports presented to the Project Management team, HCOASC, and the Project Advisory Group. In this report, there will be a discussion of the background to the project, project management details, data collection and data analysis techniques, a description of the outcomes for the project, and conclusions about how the "Delirium Care Pathways" can be used to inform health care policy and practice. Included in the report is a submission of the "Delirium Care Pathways" Final Version which has been reviewed by HCOSAC. NSW Health will submit the documentation to HCOASC who will manage printing and publication of the documentation.

Project aims and objectives

The overall aim of the project is to:

- Build on the HCOASC "Clinical Practice Guidelines for the Management of Delirium in Older People" (Melbourne Health, 2006) to develop "Delirium Care Pathways" documentation which is relevant and useful to patients/ clients, carers, and practitioners, across three care settings: (i) community; (ii) acute; and (iii) residential aged care facilities

The specific objectives are to:

- Review existing literature and delirium care pathways
- Undertake a stakeholder consultation process to inform the development of the content and structure of "Delirium Care Pathways" documentation
- Develop draft "Delirium Care Pathways" documentation for use across care settings: (i) community; (ii) acute; and (iii) residential aged care facilities
- Trial the draft "Delirium Care Pathways" with patients/ clients across care settings (i) community; (ii) acute; and (iii) residential aged care facilities
- Produce a final version of the "Delirium Care Pathways" documentation

Background

Delirium is an important clinical issue which it has long been known to be too often under-diagnosed, mis-diagnosed, and mis-managed (Inouye, van Dyck & Alessi et al., 1990). Delirium occurs across care settings in the community, acute, and residential aged care facilities (RACFs). Much research has been undertaken in this area and many tools exist to provide practitioners with guidance about how to more effectively prevent, recognise, and treat/ manage a patient/ client experiencing a (potential) delirium (for example, Poole & McMahon, 2005). Despite this, delirium

continues to be ineffectively addressed. The Australian Health Ministers' Advisory Council (AHMAC) are addressing this issue and published the "Clinical Practice Guidelines for the Management of Delirium in Older People" for the HCOASC.

The UoW has built on this work to develop the "Delirium Care Pathways" documentation produced for the HCOASC. Two versions have been produced (i) Booklet style and (ii) Poster style. The documentation will be relevant and useful for preventing, recognising, and treating/ managing patients/ clients, carers, and practitioners across care settings in community, acute, and RACFs and will be used to contribute to improving the care of (potential) delirium.

The aim of the content of the "Delirium Care Pathways" documentation is to provide practitioners with detail to guide the care of (potential) delirium in their care setting. The documentation is to be used in conjunction with the "Clinical Practice Guidelines for the Management of Delirium in Older People". This includes information sheets for patients/clients, carers, and practitioners to be used to improve knowledge and understanding about delirium and preventing, recognising, and treating/ managing delirium. A range of resources already exist which provide practitioners with guidance on effective care pathways for patients/ clients with (potential) delirium. These resources have been drawn on to develop the HCOASC "Delirium Care Pathways".

An inductive approach was adopted to the development and trialling of the HCOASC "Delirium Care Pathways". A range of practitioner stakeholders were consulted to develop the content and structure of the documentation and practitioners, patients/ clients, and carers participated in trialling a draft version of the documentation. This process was used to ensure the content and structure of the "Delirium Care Pathways" is relevant and useful to all stakeholders. So far, our search of existing clinical guideline and pathway documentation has revealed few projects which have adopted this type of inductive approach in the development of documentation. Our approach increases the likelihood that the documentation produced is relevant and useful in the care of a (potential) delirium and therefore used in clinical settings by practitioners.

Project management

Development of HSOASC "Delirium Care Pathways" documentation which will accompany the "Clinical Practice Guidelines for the Management of Delirium in Older People" was undertaken in the following way:

- NSW Health commissioned the School of Nursing, Midwifery & Indigenous Health, University of Wollongong to deliver the project
- Project undertaken part-time over seven months
- Project Management Group consisting of NSW Health and UoW representation established to determine project activities and monitor project progress
- Project Team at UoW established to manage day-to-day project activities and deliver the project outcomes
- Project Advisory Group established to provide guidance on project processes and inform the content and structure of "Delirium Care Pathways" documentation
- Three project stages established: (1) Literature review; (2) Data collection and analysis and development of "Delirium Care Pathways" Draft Versions;

and (3) Trialling of "Delirium Care Pathways" Draft Version in clinical practice
- Cross setting consultation: (i) community, (ii) acute; and (iii) residential aged care facilities accessed to develop and trial the "Delirium Care Pathways" Draft Version to ensure documentation relevant across care settings
- Stakeholder consultation process consisted of: (i) focus groups and expert interviews to inform content and structure of "Delirium Care Pathways" Draft Versions and (ii) a practitioner feedback survey capturing patient/ client and carer data during the trial stage to refine content and structure of "Delirium Care Pathways" Draft Versions
- "Delirium Care Pathways" Final Version and "Final Report" documenting project findings submitted to HCOASC

In summary, the inductive approach adopted enabled a wide range of stakeholder feedback to be included and increase the relevance and usability of "Delirium Care Pathways" documentation. Good project management processes were also implemented to ensure project outcomes delivered.

Project Team at the University of Wollongong

Below is a description of the Project Team at the University of Wollongong:

- *Project Lead:* Associate Professor Victoria Traynor (PhD, BSc (Nursing) Hons, RGN), Director, Eastern Australia Dementia Training & Study Centre and Associate Professor (Rehabilitation, Continuing & Aged Care), School of Nursing, Midwifery & Indigenous Health, University of Wollongong
- *Project Co-ordinator:* Nicole Britten (B App Sc (OT), Grad. Cert. in Gerontology and Rehabilitation), Occupational Therapist, Aged Services Emergency Team, South East Sydney & Illawarra Area Health Service
- *Administration:* SNMIH staff provide administrative support for this project

Quality processes

A range of processes have been implemented to monitor the quality of the outputs from this project. These will now be described below.

Project Management Group

The Project Management Group included the following members:

- NSW Health
  - Barbara Anderson (Chair) and Jennifer Kempster
- UoW
  - Associate Professor Victoria Traynor and Nicole Britten

The Project Management Group met every 4-6 weeks via teleconference and had two face-to-face meetings. The Project Team at UoW also met face-to-face weekly and were in additional regular email and telephone contact to manage day-to-day project issues.

Advisory Group

The Advisory Group met twice (8/12/08 and 16/3/09) using face-to-face and teleconference participation and email correspondence for commenting on draft "Delirium Care Pathways" documentation. Membership of the group was as follows:

- Margaret Brown, Area Clinical Nurse Consultant (Dementia and Delirium), South East Sydney & Illawarra Area Health Service
- Anne Cumming, A/ Manager, Dementia, Carers and Disability Team, Primary Health and Community Partnerships, NSW Health
- Tania Cossich, Senior Project Officer, Sub-Acute Services, Dept of Human Services, Victoria
- Dr Terry Finnegan, Geriatrician, North Sydney Central Coast Area Health Service
- Colleen McKinnon, Area Clinical Nurse Consultant (Dementia and Delirium), South East Sydney & Illawarra Area Health Service
- Anne Moehead, Nurse Practitioner (Psychogeriatrics), North Coast Area Health Service
- Dr Nerida Paterson, Senior Lecturer, Division of General Practice, University of Newcastle
- Mary Pillars, Consultant, Aged and Community Services Association, NSW and ACT
- Julia Poole, Clinical Nurse Consultant (Aged Care), North Sydney Central Coast Area Health Service
- Sonia Wevers, Carer representative

A range of stakeholders were represented within the Advisory Group to ensure the content and structure of the HCOASC "Delirium Care Pathways" is relevant and useful for patients/ clients, carers, and practitioners.

Project design

Stage 1: Literature review and ethics application

This stage was completed between September and October 2008 and the activities undertaken in this stage will be described below.

Literature review

The literature review was an extensive exercise drawing on a range of strategies to locate relevant resources to inform the development of the HCOASC "Delirium Care Pathways". A range of academic databases were searched to access scholarly articles. These were as follows:

- CINAHL
- Web of Science
- Cochrane
- Medline

In total, 112 articles were retrieved and reviewed to inform the content and structure for the HCOASC "Delirium Care Pathways".

Since the topic of delirium is a significant clinical issue many of the sources which review delirium are considered "Grey Literature" and cannot be searched using academic search strategies and thus the following search engine was also used:

- Google

In addition, a very important and useful strategy used to locate relevant literature was to send an email request for examples of delirium resources being used in practice using the following contact databases:

- HCOASC
- NSW Health Clinical Nurse Consultant Dementia Network
- Eastern Australian Dementia Training & Study Centre
- Australian Association of Gerontology
- Geriatric Society of America
- British Society of Gerontology

In total, 30 emails were received, from Australia, England, and Ireland, consisting of information about delirium resources. Some responses were particularly useful because authors attached copies of resources being used to guide care in clinical practice. Following a review of these documents, three examples of delirium pathways were considered to be useful resources to draw on for informing the content and structure of the HCOASC "Delirium Care Pathways". These documents were:

- Clinical Practice Guidelines for the Management of Delirium in Older People (Melbourne Health, 2006)
- Broken Hill Aged Care Project (KPMG, 2008)
- Poole's Algorithm (Poole & McMahon, 2005 and Poole, 2005)

Other documents at first appeared useful but further review found they did not have sufficient detail to become guides for the HCOASC "Delirium Care Pathways" (Aged Care Services, Liverpool Hospital, 2004; Wilhelm & Brakespear, 2007).

The "Stroke Care Pathway" (National Stroke Foundation, 2006) was also reviewed because this document was produced as part of the same portfolio of work from which the HCOASC "Delirium Care Pathways" project was commissioned. The Advisory Group considered this document too lengthy to be a useful model. They considered the "Clinical Practice Guidelines for the Management of Delirium in Older People" a sufficiently detailed document which needed to be referred to in the "Delirium Care Pathways" document. They expected a pathway document to be a companion document providing succinct and concise guidance about clinical care. Integrating findings from this literature review will ensure that the HCOASC "Delirium Care Pathways" builds on existing knowledge and is a contemporary resource which makes use of learnings from a range of publications.

Ethics application

In accordance with the National Health & Medical Research Council (2003) guidelines a request to the UoW and South East Sydney & Illawarra Area Health Service Human Research Ethics Committee (HREC) was submitted to seek approval for the HCOASC "Delirium Care Pathways" Project to be undertaken as a quality activity. The HREC reviewed this application and requested a full ethics application be submitted. A draft version of the application was reviewed by the SNMIH, UoW, Ethics Sub-Committee before submission to the HREC. Approval to undertake the consultation process involving patients/ clients, carers, and practitioners was gained from the HREC.

Stage 2: Data collection, data analysis and development of "Delirium Care Pathways" Draft Version2

This stage of the project was undertaken from November to February 2009. At Advisory Group Meeting1 the "Delirium Care Pathways" Draft Version1 was reviewed and the feedback provided was used by the UoW Project Team to develop "Delirium Care Pathways" Draft Version2. Thus, the Project Team were able to ask practitioners participating in the focus groups and expert interviews to review "Delirium Care Pathways" Draft Version2.

Setting and sample

Clinical sites across a range of geographical locations care settings were nominated by the Project Management Group to be approached for participation. The geographical locations spread across NSW from Broken Hill in the west of the State, Sydney city centre, coastal towns towards the Victorian and Queensland borders, and Canberra in ACT. See Table 1 for a summary of the clinical settings which were recruited to participate and the type of target group they represented.

Table 1: Summary of care settings participating in the development of the "Delirium Care Pathways" Draft Version2 by clinical site and target group

Care setting	Clinical site	Target group
Community	Aged Care Assessment Team	(i) Metropolitan, (ii) CALD, (iii) ATSI, and (iv) Rural & Remote
Acute	Acute ward and Aged Services Emergency Team	(i) Metropolitan and (ii) Rural & Remote
Residential	High and Low Care	(i) Metropolitan and (ii) Rural & Remote

Metropolitan as well as rural sites were recruited to participate and representation from other special needs groups of Aboriginal and Torres Strait Islander (ATSI) and Culturally and Linguistically Diverse (CALD) communities was also achieved.

Data collection

Data collection consisted of (i) focus groups and (ii) expert interviews. The prompt lists used to generate data about the content and structure of a "Delirium Care Pathways" were developed by the Project Management Group. As preparation, all participating clinical sites were sent a copy of the "Clinical Practice Guidelines for the Management of Delirium in Older People" to review.

All focus groups and expert interviews were digitally sound recorded during face-to-face activities with the exception of a teleconference for rural participants. All data were transcribed verbatim and data were de-identified using codes to ensure participant cannot be identified. Maintaining anonymity during this project is important because merely reporting the job title of a participant, for example, "Nurse Practitioner" could reveal his/ her identity because the participants are drawn from a small group of specialists.

Data analysis

Focus group and expert interview data were analysed using content analysis techniques (Silverman, 2006) to discover what (i) content about delirium should be

included and (ii) structure is considered to be useful within the "Delirium Care Pathways". The findings were compared across focus groups and expert interviews to ensure the "Delirium Care Pathways" documentation is relevant and useful to practitioners.

Findings

The content and structure of the "Delirium Care Pathways" Draft Version2 was informed by the following activities:

- Analysis of focus groups
- Analysis of expert interviews
- Comments made by Project Management members at NSW Health

Findings from the analysis of the focus groups and expert interviews are presented below. See Table 2 for a summary of the care settings and clinical sites which participated in the focus groups and the professional roles of individual practitioner participants. In total, 7 focus groups were undertaken with a total of 37 practitioners participating.

Table 2: Summary of focus group participants reviewing "Delirium Care Pathways" Draft Version2 by care setting, clinical site, and role (N)

Care setting and region	Clinical site and professional role of practitioners	N practitioners
	Focus groups	
Community		
Metropolitan & CALD	*Aged Care Assessment Team1*	*7*
	Clinical Nurse Consultant (1) Senior Occupational Therapist (2) Senior Physiotherapist (2) Senior Speech Therapist (2)	
Rural	*Aged Care Assessment Team2*	*4*
	Social Worker (Team Leader) (1) Occupational Therapist (1) Registered Nurse (CNS) (1) Dementia Nurse (CNC) (1)	
Acute		
Metropolitan	*Emergency Department1*	*3*
	Clinical Nurse Specialist(2) Social Worker(1)	
Rural	*Acute Care2 (via teleconference)*	*2*
	Clinical Nurse Consultant (CNC) (2)	
Residential		
Metropolitan	*Nursing Home/ High Care1*	7
	Assistant Care Manager (2) Registered Nurses (2) Endorsed Enrolled Nurses (2) Assistant in Nursing (1)	

Care setting and region	Clinical site and professional role of practitioners	N practitioners
Metropolitan	*Hostel/Low Care1*	*5*
	Director of Nursing (1) Assistant Care Manager (1) Clinical Care Manager (2) Nurse Educator (1)	
Rural	*Residential Aged Care2*	*9*
	Director of Nursing (1) Assistant Care Manager (1) Registered Nurses (2) Enrolled Nurse(1) Diversional Therapists (2) Assistant in Nursing (2)	
Total		**37**

See Table 3 for a summary of the practitioners who participated in the expert interviews by care setting and job title. In total, there were 8 expert interviews.

Table 3: Summary of expert interviews participants reviewing "Delirium Care Pathways" Draft Version2 by care setting and job title (N)

Care setting	Job title of practitioner	N practitioners
	Interviews	
Across settings	Clinical Nurse Consultant	1
	Nurse Practitioner	1
Community	ATSI Clinical Nurse Consultant	1
	GP, Royal College of General Practitioners	1
Residential	Nurse Practitioner	1
Acute	Aged Care Nurse Manager and Clinical Nurse Consultant Delirium	2
	Clinical Nurse Consultant, Emergency Department	1
Total		**8**

In total, 45 practitioners participated in this stage of the project and informed the review of the "Delirium Care Pathways" Draft Version2.

The focus groups and expert interviews were analysed using content analysis. See Table 4 for a summary of the findings from the analysis. Four themes were identified: (i) Clinical Guidelines; (ii) Relevance of Pathways; (iii) Purpose of Pathways; and (iv) Content of Pathways. The table provides summaries of data from practitioners to explain how the themes were used to inform amendments made to the "Delirium Care Pathways" Draft Version2.

The majority of comments made about "Delirium Care Pathways" Draft Version2 were related to the layout and colour of the document and enhancing its clarity. The "Delirium Care Pathways" Draft Version2 was updated using the findings from the data analysis undertaken during this stage of the project and presented to the NSW Health members of the Project Management Group for review. Further comments were suggested and amendments were accordingly made.

Table 4: Summary of content analysis findings from focus group and expert interview data by theme

Theme and examples of findings
(i) Clinical Guidelines
• Majority of practitioners delivering face-to-face care saw Clinical Guidelines for the first time during this project (FGs) • All experts had reviewed the Guidelines and the majority had initiated implementation of the Clinical Guidelines (EIs) • Practitioners reported that Clinical Guidelines were too long to be useful in practice and experts recognised this as a limitation in their use (FGs and EIs)
(ii) Relevance of Pathways
• Particularly useful in RACFs where practitioners are from older aged ranges and not always familiar with using evidence based practice resources (FGs) • GPs, in particular, need to be aware of the Pathways because of the GPs' pivotal and crucial role in ensuring access to appropriate services (EIs)
(iii) Purpose of Pathways
• Practitioners recognised the usefulness of the Pathway for providing them with evidence to support their liaison with medical practitioners (FGs)
(iv) Content of Pathways: Assessment and screening
• There are assessment and screening tools which RACFs must use to report the needs of their residents and apply for the accompanying monies for funding • Multi approaches needed, including, online with hyperlinks, hard copy, and poster versions (FGs and EIs) • Orange colour to be continued to maintain association with HCOASC delirium documents (EIs) • Publication and distribution of Pathways very important • GPs need to be targeted with notice about availability of Pathways to ensure their use of the Pathways is increased (EIs) • Need a strategic plan to distribute Pathways otherwise the difficulties in accessing the Clinical Guidelines will be replicated with the Pathways (EIs) • Pathway must not be prescriptive (FGs)

FG: Focus Groups/ EI: Expert Interviews

Overall, the findings from the review of the "Delirium Care Pathways" Draft Version2 demonstrate that practitioners considered the document useful and relevant for their clinical work and care setting. They did not consider many amendments needed to be made to the "Delirium Care Pathways" Draft Version2 before using to guide the care they deliver. An extract from a focus group participant in a high care residential aged care facility is used to illustrate this view:

> *"That's exactly what we do [NH staff]. Do you want any other point's added [NB]? No [NH staff]."*
>
> *(Focus Group Participant 13/09)*

This extract of data is representative of views expressed by other practitioners in other care settings. Thus, there was confidence among the Project Team that the amendments made to the "Delirium Care Pathways" Draft Version2 produced a new

document of sufficient quality to undertake a meaningful trial of "Delirium Care Pathways" Draft Version3.

Stage 3: Trial of "Delirium Care Pathways" Draft Version3

During March 2009, the trial of the "Delirium Care Pathways" Draft Version3 was undertaken and findings from this stage were used to inform the development of "Delirium Care Pathways" Final Version4. Practitioners who participated in the focus groups and expert interviews were asked to volunteer to take part in the trial. There was an aim of recruiting 6 sites across the 3 care settings (2 x community + 2 x acute + 2 x residential aged care facilities) to trial the "Delirium Care Pathways" Draft Version3. Recruitment for the trial stage was more successful than expected with all focus group participants volunteering to participate. Descriptions of the trial stage and the findings from this stage are reported below.

Setting and sample

As already stated the practitioners who reviewed "Delirium Care Pathways" Draft Version3 and recruited patients/ clients to trial the document were drawn from among the practitioners who participated in the earlier development stage of this project. Thus, representation from across NSW and the special needs groups was achieved (see p. 6).

Data collection

The practitioner feedback survey was undertaken using a "Practitioner Feedback Form" developed by the Project Team at UoW. This practitioner feedback survey included questionnaire items which participants completed to record the outcome of trialling patients/ clients on the "Delirium Care Pathways" Draft Version3. The practitioner feedback survey included the following types of questionnaire items about the "Delirium Care Pathways" Draft Version3:

- Demographic details about (i) patients/ clients who were trialled using the document and (ii) practitioners trialling the document
- Quality criteria questions using Likert scale items to evaluate the document content and structure
- Yes/ No questions about implementation issues for the "Delirium Care Pathways" Draft Version3
- Open ended questions to enable practitioners to provide ideas for amending the document

A wide range of questions were asked to provide a thorough view on the relevance and usability of the "Delirium Care Pathways" Draft Version3.

Data analysis

Both qualitative and quantitative data were gathered from participants who trialled the "Delirium Care Pathways" Draft Version3. The qualitative data were analysed using a content analysis approach (Silverman, 2006) and descriptive statistics (Polit, 1996) were generated to analyse the quantitative data gathered.

Findings

The profiles of the trial sites are reported first. See Table 5 for a summary of the sites and the number of patients/ clients who were trialled in this stage of the project.

Table 5: Summary of trial patient/ client participation of the "Delirium Care Pathways" Draft Version3 activities by care setting (N and %)

Care setting	N sites (percentage %)	N patients/ clients (percentage %)
Community	3 (20)	0 (0)
Acute	7 (47)	5 (42)
Residential	5 (33)	7 (58)
Total	**15 (100)**	**12 (100)**

To summarise, a total of 15 sites volunteered to participate in the trial of the "Delirium Care Pathways" Draft Version3 across care settings of: community (3 sites), acute (7), and residential aged care (5). Lead participants in each of these sites were asked to trial the "Delirium Care Pathways" Draft Version3 with 2 patients/ clients. Participating practitioners were asked to trial a total of 22 patients/ clients experiencing a delirium and to have had their care structured using the "Delirium Care Pathways" Draft Version3. In total, 12 patients/ clients were trialled using the "Delirium Care Pathways" Version3 (0 community + 5 acute + 7 residential aged care).

Nearly half of those sites who participated in the trial were acute care settings but more than half of the patients/ clients recruited to be trialled were from residential aged care settings. The sample of patients/ clients who were recruited for the trial stage of the project reflect the typical profile of patients who experience a delirium. That is, residents living in a nursing home or hostel are often frail older people and have an increased risk of developing a delirium associated with the co-morbidities which they are likely to be living with (Inouye, van Dyck & Alessi et al., 1990). These residents are most likely to be at risk of or experience a delirium requiring medical intervention

Community sites were unable to recruit patients/ clients with whom they could trial the "Delirium Care Pathways" Draft Version3. The community practitioners recruited to participate in this stage of the project were from Aged Care Assessment Teams who are only likely to receive referrals about a (potential) delirium from an existing client of theirs. It might have been useful to also include in the trial stage providers of Extended Aged Care at Home (EACH) and Extended Aged Care at Home Dementia (EACH D) packages. These providers were not recruited to the trial because, in the main, these packaged are provided by support workers and our trial was targeted at gathering the views of registered practitioners.

The "Clinical Practice Guidelines for the Management of Delirium in Older People" aims to be relevant to both registered practitioners and support workers and thus the "Delirium Care Pathways" Draft Version3 also needs to be relevant to both these groups. It is the overall responsibility of registered practitioners to implement the guidelines in the document and therefore participation of registered

practitioners was prioritised. It is their views on the content and structure of the "Delirium Care Pathways" Draft Version3 which were gathered from the community settings.

See Table 6 for a summary about the clinical areas in which patients/ clients were trialled on the "Delirium Care Pathways" Draft Version3 and the clinical areas from where practitioners provided comments about the content and structure of the document.

Table 6: Summary of care settings and clinical sites trialling "Delirium Care Pathways" Draft Version3 by clinical site and patients/ clients (N)

Care setting and clinical site	N sites	N patients/ clients
Community		
GP Metropolitan1	1	0
Aged Care Assessment Team Rural1	1	0
Aged Care Assessment Team Metropolitan1	1	0
Acute		
Emergency Department Rural1	2	1
Emergency Department Metropolitan1 + Metropolitan 2	1	2
Acute ward Metropolitan1	1	0
Acute ward Rural1	2	2
Residential		
Residential High Care1	2	2
Residential High and Low Care1	1	4
Residential Low Care1	2	1
Total	**15**	**12**

Some sites were unable to trial with a patient/ client as no patients/ clients with a delirium presented to their service during the trial stage. All practitioners who volunteered to trial "Delirium Care Pathways" Draft Version3 completed the practitioner feedback survey questionnaire items on content and structure. These comments were used to inform further amendments which were made to the documentation.

Demographic details (i) patients/ clients and (ii) practitioners participating in trial

During the trial of the "Delirium Care Pathways" Draft Version3 practitioners were asked to record demographic details about the patients/ clients who were trialled on the pathway. See Table 7 for a summary of the age groups of the participating patients/ clients. Nearly one-third of participants were over 90 years (7 in total). This is perhaps a higher number than is representative of the incidence rate of delirium. This finding reflects the high proportion of patients/ clients from the RACFs who were trial participants. These care settings have a higher age range than those found in community or acute care settings and thus increased the

proportion of those aged over 90 years in this trial. Within the age group of less than 60, there were no patients/ clients (0).

Table 7: Summary of the patients/ clients trialled using the "Delirium Care Pathways" Draft Version3 by age group (% and N)

Age group (years)	Percentage (%) of patients/ clients (N)
<60	0
61-70	17 (2)
81-90	25 (3)
>90	58 (7)
Total	**100 (12)**

There were also no patients/ clients (0) represented by the ATSI communities. There was however practitioner representation from specialist services for ATSI communities and thus comments from this perspective are included in the documentation. Patients/ clients from CALD communities were identified and in total 2 (17 per cent) patients/ clients from CALD communities participated in the trial. The location of patients/ clients who participated was also recorded by the practitioners and 5 (42 per cent) were from Rural and Remote communities. These findings demonstrate that the outcomes will be relevant and useful for patients/ clients and carers from special needs groups.

In Table 8, there is a summary of the professional role of practitioners who trialled the "Delirium Care Pathways" Draft Version3.

Table 8: Summary of practitioners who trialled the "Delirium Care Pathways" Draft Version3 by professional role (% and N)

Professional role	Percentage (%) of practitioners (N)
Registered/ Enrolled Nurse	61 (11)
Social Worker	16 (3)
General Practitioner	11 (2)
Recreational Activity Officer	11 (2)
Total	**99* (18)**

*: Rounding down decimal points

The majority of practitioners were from a nursing background (63 per cent). This is not an unexpected finding given that nurses make up the highest proportion of practitioners in the healthcare workforce.

Suggested amendments for "Delirium Care Pathways" Draft Version3

The practitioner feedback survey included questionnaire items asking practitioners to consider what amendments might be made to the "Delirium Care Pathways" Draft Version3. The comments made by practitioners are summarised in Table 9.

Table 9: Summary of suggestions made by practitioners for amending "Delirium Care Pathways" Draft Version3 by amendment and N times

Comment summary	Modification made (Yes, No, or comment)	N times reported
Content		
In flow chart assess "clinical issues" before "screen in acute delirium".	No. Literature states best practice is to undertake screening of all patients/ clients as the first step in delirium care.	1
Advanced care plan in the residential Example	Yes. Added	2
Issues of consent in residential Example	Yes. Added	2
Add to the Pathway (i) checklist on the Electronic Medical Records (eMR) and (ii) delirium brochure should be a NSW Health one	No. Pathway is a national initiative and reference to state-wide documents not appropriate. Pathway states "refer to service/ facility preferred diagnostic and assessment tools". Will add "or any other relevant material".	2
Sub-total of comments		*7*
Structure		
Pharmacological Management figure too small	Yes Will be resolved during publication of Delirium Care Pathways.	1
Format too long	No Without appendices document is only one page long. This will become clearer when final document is published.	1
Sub-total of comments		*2*
Total of comments		**9**

The practitioners who trialled the "Delirium Care Pathways" Draft Version3 consider the content and format, in the main, useful and relevant for providing guidance in the care of (potential) delirium. The inductive approach used to develop "Delirium Care Pathways" Draft Version1 and Version2 has ensured that the views of practitioners informed the content and structure of "Delirium Care Pathways" Draft Version3 reflects the needs of practitioners.

Evaluation of quality criteria of "Delirium Care Pathways" Draft Version3

Practitioners were asked to complete some quality questions about the "Delirium Care Pathways" Draft Version3 to discover their views about the usability and relevance of the document.

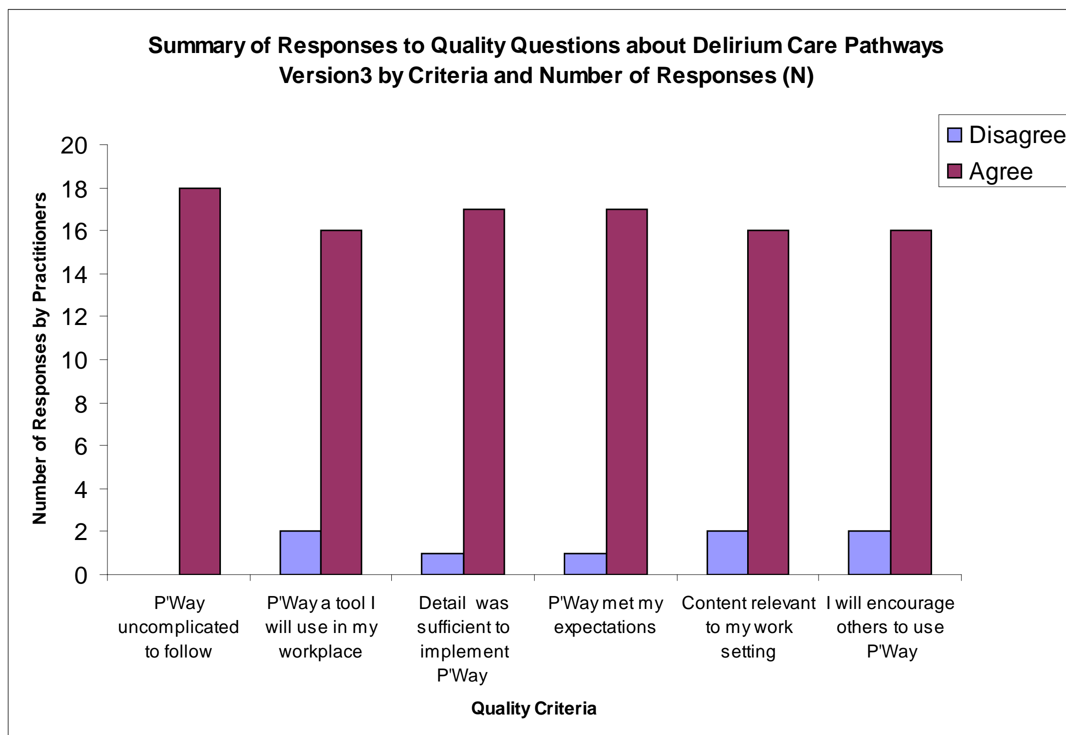

Figure 1: Summary of practitioner responses to quality questions about the "Delirium Care Pathways" Draft Version3 by criteria and N responses

In Figure 1 there is a summary of practitioner views about the quality of the document. In all six quality criteria questionnaire items 90 per cent of practitioners (17/18) considered the "Delirium Care Pathways" Draft Version3 useful and relevant.

Recommendation for use of "Delirium Care Pathways" Draft Version3

All practitioners (100 per cent) stated, within another practitioner feedback survey questionnaire item, that they would recommend the use of the "Delirium Care Pathways" document to other colleagues. This is clearly an endorsement for the content and structure of the "Delirium Care Pathways" Draft Version3.

"Delirium Care Pathways" Final Version documentation

The development of the HCOASC "Delirium Care Pathways" Final Version4 was informed by findings from a trial of the "Delirium Care Pathways" Draft Version3 and feedback from Advisory Group members. A final round of comments was received on "Delirium Care Pathways" Draft Version4 from the HCOASC Clinical Reference Group, NSW Health members of the Project Management Group, and the Advisory Group members to create "Delirium Care Pathways" Final Version. See accompanying "pdf" documents "Delirium Care Pathways" Final Version: Booklet Style and "Delirium Care Pathways" Final Version: Poster Version submitted with this Final Report for HCOASC.

This iterative process with which the "Delirium Care Pathways" Final Version was developed reflects the emphasis on stakeholder engagement which was prioritised from the start of this project. The result is that that the HCOASC can be assured that the contents and structure of the "Delirium Care Pathways" Final Version reflects the views and experiences of those who will use the documentation to inform their practice and enhance the care of people with a (potential) delirium. This is in contrast to many projects which were reviewed as part of the literature

review for this project and their over-reliance on expert reference groups rather than consultation with practitioners, users, and carers to develop clinical guidelines and pathway documentation.

Distribution and access issues

Discussions at Advisory Group Meeting2 and findings from the focus groups, expert interviews, and trial stage of the project, included suggestions about distribution and implementation strategies for use of the "Delirium Care Pathways" documentation. It is therefore important to provide commentary on the issues raised to complement the submission of the "Delirium Care Pathways" Final Version and contribute to a successful use of the documentation. In summary, two main issues were raised by the Advisory Group members and participants in the project: (i) access to documents and (ii) use of electronic hyperlinks within documents. These issues will now be discussed.

(i) Accessing existing clinical guidelines and pathways documents

An important issue is distribution of documentation to practitioners in clinical areas. The majority of practitioners participating in this project reported a lack of awareness of recent guideline and pathway documentations, that is, they had not seen the documents. In preparation for their participation in this project, the UoW Project Team accessed a PDF copy of the "Clinical Practice Guidelines for the Management of Delirium in Older People" and arranged for a hard copy of the document to be posted to all participants to enable them to review the document in advance of their participation. Access issues specifically reported were as follows:

- Original mail-out of documents in some States and Territories can be limited to posting out of documents to generic managerial staff of a major service without strategic direction for locating relevant specialists to take on responsibility for appropriate distribution of documents
- Participants working in aged care facilities reported the lowest level of awareness about key clinical guideline and pathway documents
- The General Practice site who participated reported that none of the GPs working in their practice were aware of key clinical guideline and pathway documents
- Lack of access to the World Wide Web in rural and remote regions prevents practitioners being able to view the online PDF version of documents
- Senior practitioners, for example, Clinical Nurse Consultants are sometimes unable to obtain additional copies of documents and distribute hard copies to their colleagues

This is an important issue to consider when developing a strategy for distribution of the "Delirium Care Pathways" document.

Findings from this project are used to make suggestions about possible strategies to consider for distributing the "Delirium Care Pathways" documentation through the following networks:

- National network of aged care Clinical Nurse Consultants, in particular, because they have links to community and acute care settings
- Divisions of General Practice, more specifically, the Education Officers

- Aged Care Services Australia (ACSA) and Aged Care Australia (ACA) networks to access residential aged care facilities

(ii) Use of internet and intranet to access document and relevant resources

Within the trial stage of the project the practitioner feedback survey included a questionnaire item asking practitioners to consider whether they could be able to use and access hyperlinked documents within the "Delirium Care Pathways". See Table 10 for a summary of their responses.

Table 10: Usefulness of hyperlinked documents within the "Delirium Care Pathways" document by practitioner response (% and N)

Access to use hyperlink documents	**Percentage (%) of practitioners (N)**
Yes	89 (16)
No	11 (2)
Total	**100 (18)**

In total, 89 per cent (16/18) of practitioners reported that the inclusion of hyperlink documents within the "Delirium Care Pathways" would be useful. The findings revealed that practitioners have ready access to computerised technology and think that access to "hyperlinked" documents within an electronic version of the "Delirium Care Pathways" would be useful. Therefore, it will be useful to include hyperlinks when publishing the "Delirium Care Pathways" document.

The content and structure of the HCOASC "Delirium Care Pathways" will be published by Department of Human Services in Victoria. They will create a PDF format of the HCOASC "Delirium Care Pathways" and a website within which the "Delirium Care Pathways" will be published. In this way, the final version of the HCOASC "Delirium Care Pathways" will match the AHMAC "Clinical Practice Guidelines for the Management of Delirium in Older People".

There does however need to be some caution made about the use of hyperlinks. Access to the World Wide Web is limited in some geographical locations and within some work places. Therefore, it will be important to ensure any hyperlinks are limited to local intranets. An extract of data from a "Practitioner Feedback Form" is presented below to illustrate this issue:

> *"If it is computer based please have a link from a health site [Intranet] as not everyone has internet access."*
>
> *(Trial Practitioner 007/09)*

An additional issue to consider is maintaining these hyperlinks. The "Delirium Care Pathways" page references to the "Clinical Practice Guidelines for the Management of Delirium in Older People" have been included in the document. Changes in this document will also need to be made to the "Delirium Care Pathways" document.

Future directions: Implementation strategies

A range of future activities were suggested by the project Advisory Group. These included the following:

- Involving the Project Team at UoW in the final production of the HCOASC "Delirium Care Pathways" when the external publishers are recruited to

publish the documentation. This will ensure the integrity of the document content and structure is maintained and that the representation of the views of the stakeholders who participated in the project is not compromised. The NSW Health Project Management members have agreed to negotiate this with HCOASC.

- Development of an implementation strategy to increase the likelihood that "Delirium Care Pathways" document is used in clinical practice to enhance the prevention, recognition, and treatment/ management of (potential) delirium. This implementation strategy would involve:
    - development of a poster style version of the "Delirium Care Pathways" document to be displayed in clinical areas
    - designing and delivering educational activities, such as, face-to-face teaching sessions using the "Delirium Care Pathways" to structure the content of these sessions to further enhance understanding about best practice in the care of (potential) delirium and how the pathways document can improve patient/ client and carer outcomes

Reporting these suggestions enables the views of the Advisory Group to be represented and provide guidance for future activities to increase the likelihood that the "Delirium Care Pathways" is successfully used in practice to enhance the care of (potential) delirium in clinical areas.

Conclusion

Delirium is a clinical issue which remains under-diagnosed, mis-diagnosed, and mis-managed across care settings in the community, acute, and RACFs (Inouye, van Dyck & Alessi et al., 1990). The project reported here was undertaken over seven months, from September 2008 to March 2009, on a part-time basis. NSW Health were commissioned by the HCOASC to deliver the "Delirium Care Pathways" and UoW were sub-contracted to undertake the project. The Project Co-ordinator who was recruited to lead the day-to-day activities of the project was seconded from one of the NSW Health Aged Services Emergency Teams. This enabled the project outcomes to be continually checked against patient/ client, carer, and practitioner relevance and usefulness. The overall aim of the project was to develop a cross-setting "Delirium Care Pathways" which is relevant and useful across settings in (i) community, (ii) acute, and (iii) RACFs.

A project Advisory Group was formed for the duration of the project and provided invaluable input into reviewing and commenting on draft versions of the "Delirium Care Pathways". An in-depth consultation process with practitioners and patients/ clients was a central activity of this project. Ethical approval was gained to undertake these stages of the project. The participating clinical sites recruited to participate in the project were geographically widespread across NSW. The individual practitioners and patient/ client participants represented the cross settings experiences of community, acute, and RACFs and the special needs groups of ATSI, CALD, and Rural & Remote communities.

The project started with a literature review and the findings from this were used to develop "Delirium Care Pathways" Draft Version1. The consultation process was characterised by adopting an inductive approach to ensure the content and structure of the "Delirium Care Pathways" were developed using practitioner views

and a trial phase with patients/ carers. Qualitative and quantitative data collection techniques were undertaken consisting of focus groups, expert interviews, and a practitioner feedback survey made up the consultation process. Content analysis (Silverman, 2006) and descriptive statistics (Polit, 1996) were generated to discover what content and structure practitioners and patients/ clients would find useful and relevant in a "Delirium Care Pathways". "Delirium Care Pathways" Draft Versions 2-5 were created and continually reviewed and refined by the Project Management Group and Advisory Group. The final outcome of the project was the production of the "Delirium Care Pathways" Final Version document: (i) Booklet style and (ii) Poster style which were submitted to the HCOASC for final production and publishing.

The findings from this project also provided suggestions on the distribution and access of the "Delirium Care Pathways" documentation, including, networks to access for distribution and considerations to be made about access to the internet. Future directions and implementation strategies were also suggested by the project Advisory Group for the style in which the document be published and possible educational initiatives to ensure successful implementation of the HCOASC "Delirium Care Pathways" documentation. The Project Team at UoW now look forward to working with the HCOASC in the final production of the "Delirium Care Pathways" documentation.

The "Delirium Care Pathways" document produced for this project underwent many rounds of reviews and revisions by practitioners and was informed by the patient/ client trial findings. The trial stage of the project was a useful contribution from this project which is often omitted in projects developing clinical guidelines or pathway documents. We look forward to the "Delirium Care Pathways" documentation contributing to the enhancement of the prevention, recognition, and treatment/ management of (potential) delirium for patients/ clients, across the care settings of community, acute, and RACFs, alongside other HCOASC other initiatives from the Clinical Reference Group to improve the care of older people in Australia.

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